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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,703	08/25/2006	Nobuharu Ohsawa	0756-7801	3823
31780	7590	08/07/2009	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			YAMNITZKY, MARIE ROSE	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			08/07/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,703	<b>Applicant(s)</b> OHSAWA ET AL.	
	<b>Examiner</b> Marie R. Yamnitzky	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 50-74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 68-70, 73 and 74 is/are allowed.
- 6) ☒ Claim(s) 50-67, 71 and 72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08 June 2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1794

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on June 08, 2009 (Amendment and Information Disclosure Statement) have been entered.
2. The amendment filed June 08, 2009 amends claims 50, 59 and 68, and adds claims 71-74. Claims 50-74 are pending.
3. The documents listed in the Information Disclosure Statement filed June 08, 2009 have been considered and are made of record.

With respect to applicant's remarks regarding the "*partial* consideration" of the IDS filed December 03, 2008, and the fact that the examiner lined through two of the citations, the examiner gave *full* consideration to each document listed in the IDS as evidenced by the examiner's initials next to each citation. The citations *per se* (i.e. the way the citations will appear on any patent issuing from the present application) for the two citations that are lined through on the December 03, 2008 form are the same on the forms filed December 03, 2008 and August 25, 2006. A notation in the T<sup>2</sup> column does not appear as part of the citation when listed on the front of a patent.

Art Unit: 1794

4. The rejections under 35 U.S.C. 112, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs, as set forth in the Office action mailed March 04, 2009 are overcome by claim amendment. (An issue that was not previously noted by the examiner is set forth below.)

5. Claims 56 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The scope of a “trifluoro group” is not clear. It is not clear if this phrase is intended to encompass any electron-withdrawing group having three fluorines.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 50-67, 71 and 72 are rejected under 35 U.S.C. 103(a) as being obvious over Inoue et al. (US 7,238,806 B2).

This reference is available under 35 U.S.C. 103(a) via 102(e), with a 102(e) date of December 28, 2004.

The applied reference has a common inventor with the instant application, but a different inventive entity. Based upon the earlier effective U.S. filing date of the reference, it constitutes

prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

See the entire patent. In particular, see column 1, lines 7-14, c. 9, l. 43-c. 10, l. 53, c. 11, l. 44-c. 13, l. 12, and formulae (20) and (22)/(23) in c. 17-18, (56) in c. 26 and (58)/(59) in c. 27.

Inoue et al. describe organometallic complexes for use in the light emitting layer of a light emitting device comprising at least a light emitting layer disposed between a pair of electrodes. Inoue's general formulae (1)-(4) and (12)-(15) encompass organometallic complexes represented by the formulae set forth in present independent claims 50, 59, 71 and 72. While Inoue et al. do not provide a specific example of an organometallic complex within the scope of

the present claims, it is the examiner's position that complexes within the scope of the present claims would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention, particularly given Inoue's general formula (15) and disclosed preferences with respect to the variables in formula (15).

Further, Inoue's organometallic complexes of formulae (20), (22)/(23), (56) and (58)/(59) are position isomers of complexes within the scope of present claims 50-55 and 59-64 (and required for the device of claims 58 and 67), with the complexes of formulae (20) and (56) also being position isomers of complexes within the scope of present claims 56, 65, 71 and 72, and the complexes of formulae (20) and (22)/(23) further being position isomers of complexes within the scope of present claims 57 and 66. (Presuming for the sake of argument that a trifluoromethyl group is within the scope of "a trifluoro group" as recited in claims 56 and 65, the complexes of formulae (22)/(23) and (58)/(59) are also position isomers of complexes within the scope of present claims 56 and 65.)

Inoue's organometallic complexes of formulae (20), (22)/(23), (56) and (58)/(59) are specific examples within the scope of Inoue's general formula (15), but Inoue's general formula (15) does not limit the position of the halogen element or haloalkyl group for  $R^{15}$  and  $R^{16}$  to the positions shown in (20), (22)/(23), (56) and (58)/(59). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to make and use other organometallic complexes within the scope of Inoue's general formula (15) and similar to the specific examples with the expectation that complexes that are similar in structure would have similar properties and could be used for the same purpose. Given Inoue's general formula (15), one of ordinary

Art Unit: 1794

skill in the art at the time of the invention would have reasonably expected that complexes similar to those of formulae (20), (22)/(23), (56) and (58)/(59), but having the -F or -CF<sub>3</sub> substituents moved one position clockwise or counterclockwise on each phenyl group, would be light-emissive and could be used for the same purpose as the complexes of formulae (20), (22)/(23), (56) and (58)/(59).

8. Claims 50-67, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. (US 2005/0191527 A1).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

See the entire patent. In particular, see paragraphs [0010], [0016]-[0022] and [0074].

Fujii et al. describe organometallic compounds for use in the light emitting layer of a light emitting device comprising at least a light emitting layer disposed between a pair of electrodes. Fujii's general formulae (1) and (2) encompass organometallic complexes represented by the formulae set forth in present independent claims 50, 59, 71 and 72.

While Fujii et al. do not provide a specific example of an organometallic complex within the scope of the present claims, it is the examiner's position that complexes within the scope of the present claims would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention, particularly given Fujii's organometallic compound (20b) as represented by the formula in paragraph [0074]. Fujii's compound (20b) is an organometallic compound

within the scope of Fujii's general formula (2), and is a position isomer of complexes within the scope of present claims 50-57, 59-65, 71 and 72 (and required for the device of claims 58 and 67). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to make and use other organometallic compounds within the scope of Fujii's general formula (2) and similar to the specific examples with the expectation that organometallic compounds that are similar in structure would have similar properties and could be used for the same purpose. Given Fujii's general formula (2), one of ordinary skill in the art at the time of the invention would have reasonably expected that organometallic compounds similar to that of Fujii's formulae (20b) compound, but having the -F substituents moved one position clockwise or counterclockwise on each phenyl group, would be light-emissive and could be used for the same purpose as the formula (20b) compound.

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.



Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 50-67, 71 and 72 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4-10 of U.S. Patent No. 7,238,806 B2 in view of Igarashi et al. (US 2001/0019782 A1).

There is substantial overlap between the organometallic complex as claimed in present claims 50-57, 59-66, 71 and 72 (and as required for the device of present claims 58 and 67) and the organometallic complex as claimed in patent claims 4-10.

The formulae set forth in the patent claims depict only a portion of the claimed organometallic complex. The complex of the patent claims has a Group 9 metal and has at least one diphenylquinoxaline ligand. Patent claims 6 and 7 require at least one electron-withdrawing substituent. Patent claim 10 is limited to iridium complexes. The patent claims are not limited to Group 9 metal complexes, such as iridium complexes, having two identical substituted diphenylquinoxaline ligands and an L ligand as required by the present claims, but such complexes are within the scope of the patent claims.

The diphenylquinoxaline ligands of the presently claimed complexes and the patented complexes are C-N coordinating ligands (also known in the art as cyclometallating or orthometallating ligands). It was known in the art at the time of the invention that iridium complexes having two identical C-N coordinating ligands and an L ligand such as acetylacetonate (the ligand represented by formula (a) in present claims 57 and 66) could be used

in the light emitting layer of a light emitting device comprising a light emitting layer disposed between a pair of electrodes as demonstrated, for example, by Igarashi et al. Igarashi et al. disclose an iridium complex having two phenylquinoxaline ligands and an acetylacetonate ligand; see (1-70) on page 17. It would have been an obvious modification to one of ordinary skill in the art at the time of the invention to make complexes within the scope of the '806 patent claims having two substituted diphenylquinoxaline ligands and an acetylacetonate ligand. Further, one of ordinary skill in the art at the time of the invention would have reasonably expected that such complexes could be used in the light emitting layer of a light emitting device having a light emitting layer disposed between a pair of electrodes.

11. Claims 50-57, 59-66, 71 and 72 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6-16 of copending Application No. 11/797,532. Although the conflicting claims are not identical, they are not patentably distinct from each other because there is substantial overlap between the organometallic complex as claimed in present claims 50-57, 59-66, 71 and 72 and the organometallic complex as claimed in copending claims 6-16.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 58 and 67 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6-16 of copending Application No. 11/797,532 in view of Igarashi et al. (US 2001/0019782 A1).

There is substantial overlap between the organometallic complex as required for the light emitting device of present claims 58 and 67 and the organometallic complex as claimed in copending claims 6-16. While the copending claims do not claim a light emitting device comprising the complex, Igarashi et al. demonstrate that it was known in the art at the time of the invention that similar complexes could be used in the light emitting layer of a light emitting device comprising a light emitting layer disposed between a pair of electrodes. For example, see paragraphs [0041]-[0044], [0135] and [0137], and see formula (1-70) on page 17 of the Igarashi reference. Having knowledge of the teachings of Igarashi et al., one of ordinary skill in the art at the time of the invention would have reasonably expected that complexes as claimed in copending claims 6-16 could be used in a light emitting device having a light emitting layer disposed between a pair of electrodes.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 68-70, 73 and 74 are allowed.

14. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday and Wednesday-Friday.

Art Unit: 1794

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

/Marie R. Yamnitzky/  
Primary Examiner, Art Unit 1794

MRY  
August 05, 2009